

Michigan Building Intelligence System (MI-BIS)

MI-BIS Challenge



To ***integrate all*** embedded devices into one system.

To ***control*** and ***monitor*** sites over the Internet.

To ***collect and analyze*** data from ***all*** systems and locations.

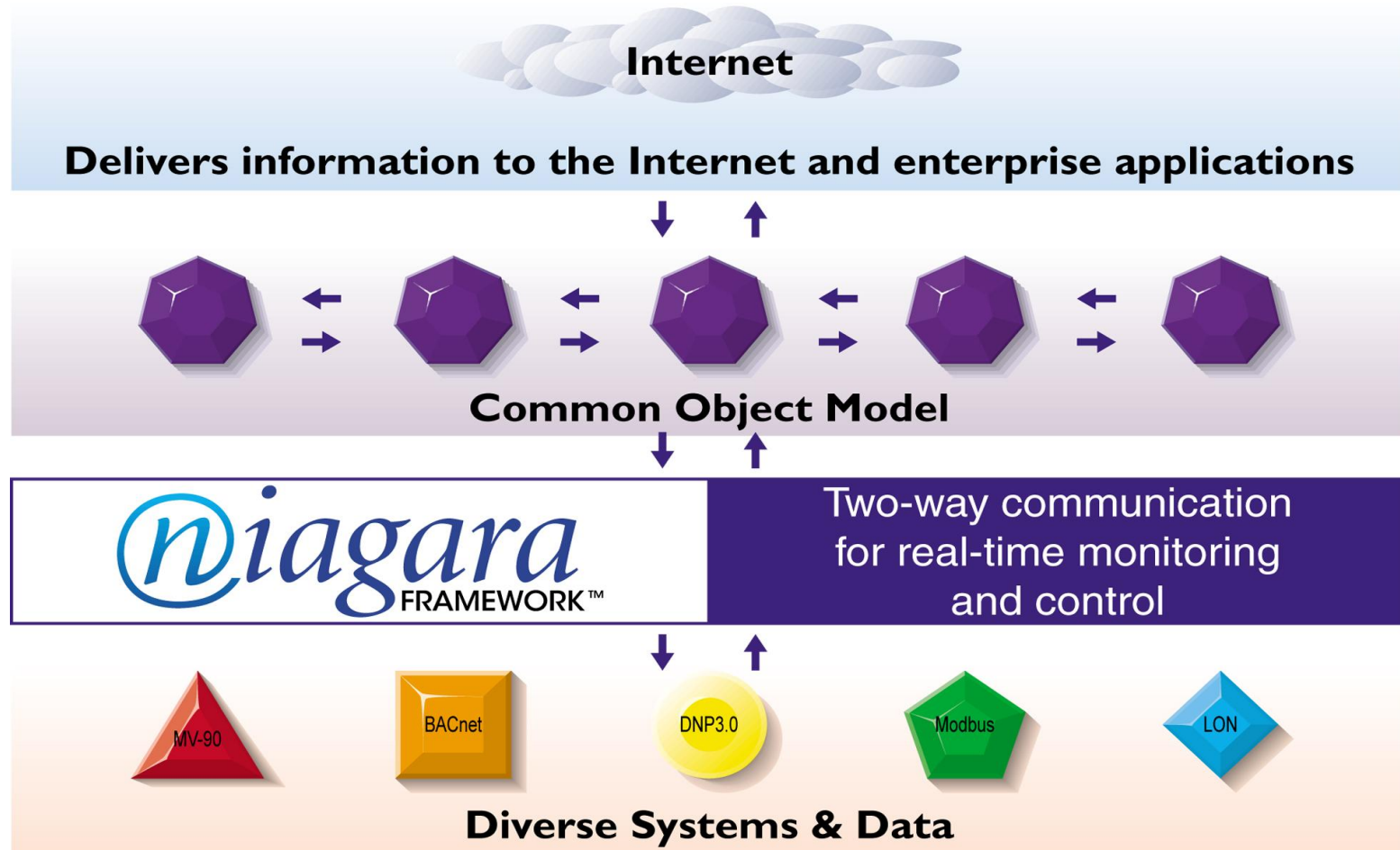
To ***reduce energy*** and ***save money***.

MI-BIS Description



- An infrastructure for building operations, energy controls and communication
- Consolidates the monitoring and management of all HVAC, lighting, elevators, and energy metering into one system.

MI-BIS Software

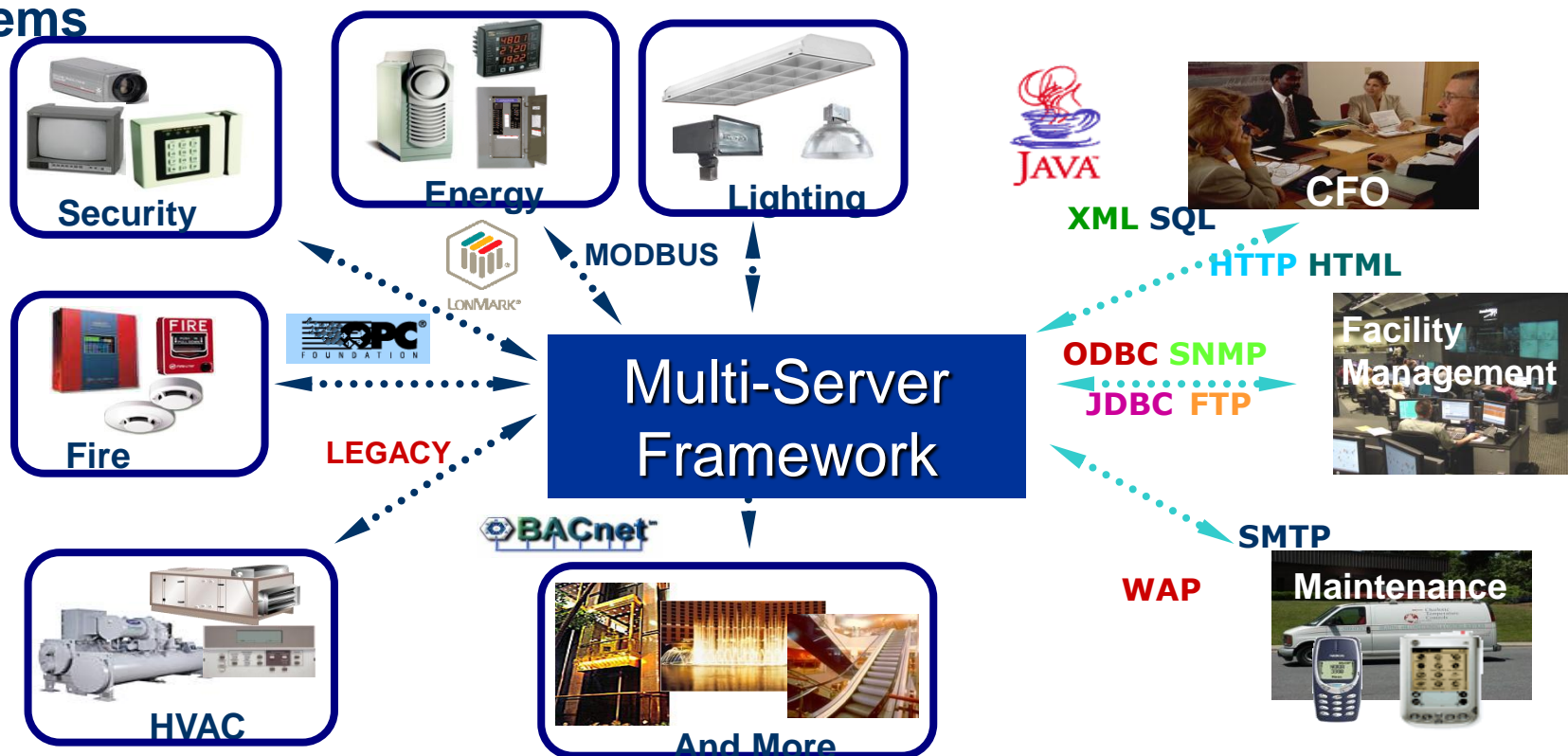




MI-BIS Framework

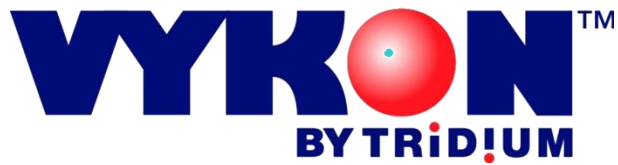
... System Integration

Systems



"From the Boiler Room to the Board Room"

MI-BIS Community



SQUARE D

Honeywell *WEBS*



TRANE®



SIEMENS

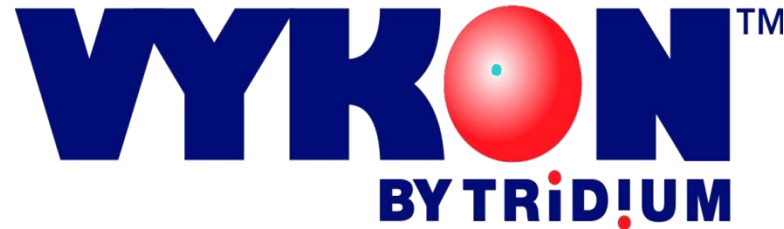


MI-BIS Cost Advantages

- ◆ More efficient energy management = LOWER COSTS
- ◆ Saves \$400,000 annually through cancellation of sole-source maintenance agreements
- ◆ Saves \$300,000 - \$500,000 per building on service bids



Vykon Energy Suite



- ♦ Analyzes utility rates
- ♦ Energy management in financial and green terms
- ♦ Benchmarks facilities
- ♦ Energy efficiency analysis tools
- ♦ Real-time energy data availability

Interface Options



http://209.69.35.104/db/CochraneDemov2/lions2/Graphics/FloorPlans/SouthWall - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Reload Home Search Favorites Media Print Copy Paste

Address http://209.69.35.104/db/CochraneDemov2/lions2/Graphics/FloorPlans/SouthWall Go Links >>

| | | | | |
|----------------|----------|-------------------|-----------------|---------|
| Average Temp | 71.0 °F | South Wall | Heat Setpoint 1 | 71.0 °F |
| Field Setpoint | 71.0 °F | | Heat Setpoint 2 | 71.0 °F |
| Field Demand | -5.00 °F | | Heat Command 1 | On |
| Occupancy | Inactive | | Heat Command 2 | Off |

Left click here to change Field Schedule

Dampers Open

| | | | |
|----|---------|----|---------|
| SE | 71.0 °F | SW | 71.0 °F |
| NE | 71.0 °F | NW | 71.0 °F |

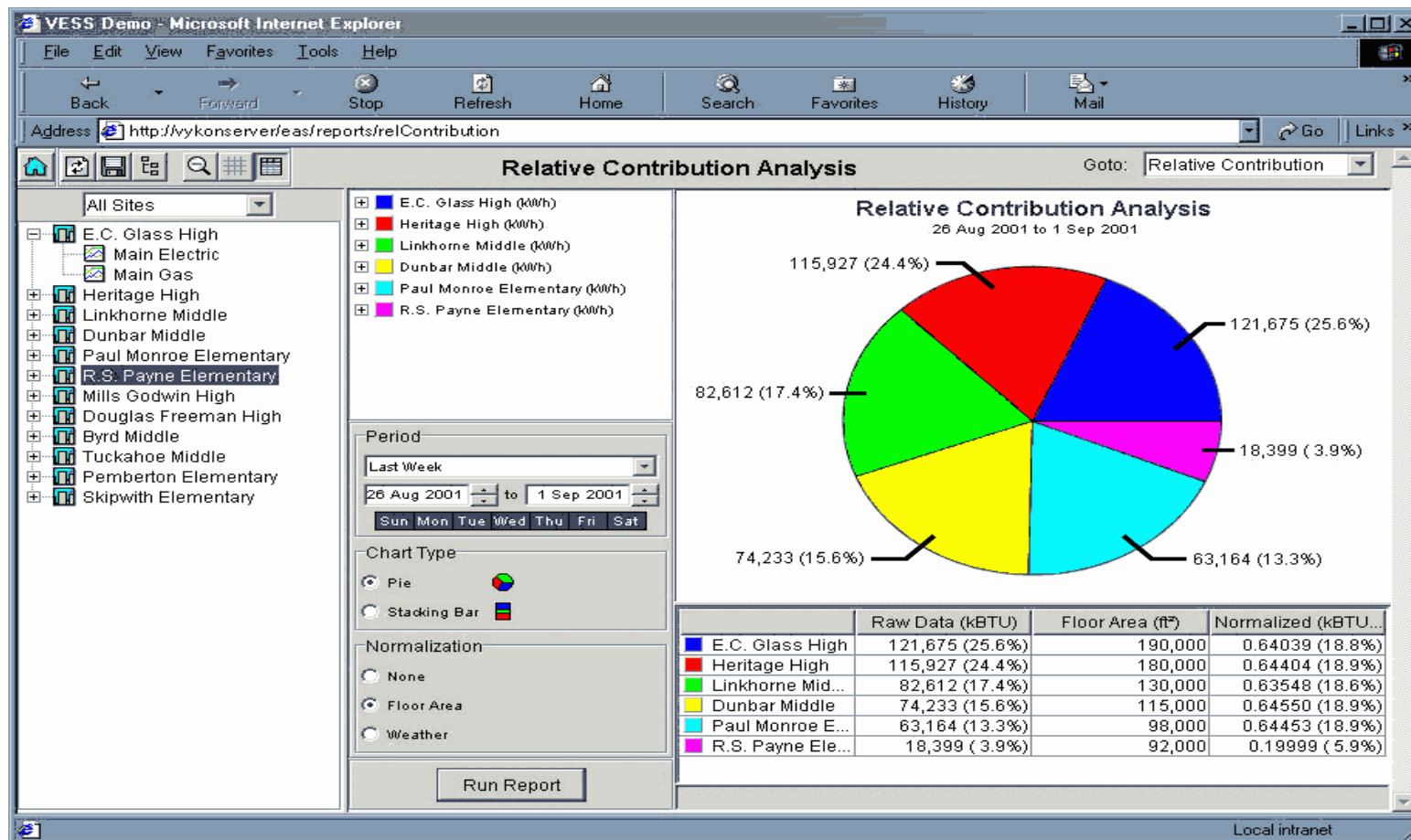
Go To West Wall Go To Playing Field Go To East Wall

Link to "/db/lions2/Graphics/FloorPlans/SouthWall"

Internet



Interface Options



Interface Options



Detroit Lions Training Facility Building Control System - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://209.69.35.104/stations/CochraneDemo2/Web/html/lions2/Main2.htm> Go Links

LIONS TRAINING FACILITY Alarm Review Audit Trail Logs Help

HOME
Floor Plans
RTUs
Weight Room
LOGS
ALARMS
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Documents

RTU 1 - Weight Room

Outside Air Temp **45.0 °F**

Occupancy Status **Unoccupied**

Left click here to alter Building Schedule



| | | | |
|----------------------------|----------------|---------------------|-----------------|
| Space Temperature | 72.4 °F | Heating Setpoint | 66.0 °F |
| Supply Air Temperature | 60.0 °F | Cooling Setpoint | 75.00 °F |
| Supply Fan Status | Off | Compressor 1 Status | On |
| Mode | Heat | Compressor 2 Status | Off |
| Economizer Damper Position | 90 % | Heating 1 Status | On |
| Diagnostic | 1 | Heating 2 Status | Off |
| Comm Status | 1 | Humidity Sensor | 48 % |
| CO2 Sensor | 446 ppm | | |

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